WHAT IS CLAIMED IS:

1. A method of controlling a surgical cutting device, the device including a hollow needle with a port for tissue entry and a moveable cutting blade for severing tissue entering the needle through said port, the blade being movable between a first position enabling tissue entry through said port and a second position closing said port, the tissue entering the needle being severed as the blade moves between the first and second positions, said method comprising the steps of:

a) providing vacuum to said hollow needle to cause tissue entry into the needle through said port;

b) moving the blade from the first position to the second position to sever the tissue entering the needle;

c) evacuation severed tissue from the needle by vacuum;

d) reducing vacuum to the needle before moving the blade from the second position to the first position; and

repeating steps a through d.

2. The method according to claim 1 wherein the vacuum applied in step (a) is regulated to control an amount of tissue entering said port before severing thereof in step (b).

3. The method according to claim 1 wherein the step of reducing vacuum includes stopping vacuum.

4. The method according to claim 1 wherein the speed of blade movement in step (b) and (d) is regulated to control amounts of tissue severed during blade movement.

5. The method according to claim 2 wherein the speed of the blade movement in step (b) and (d) is regulated to control amounts of tissue severed during blade movement.

6. The method according to claim 3 wherein the speed of the blade movement in step (b) and (d) is regulated to control amounts of tissue severed during blade movement.

7. The method according to claim 1 wherein the blade position in step (b) and (d) is regulated to control amounts of tissue severed during blade movement.

8. The method according to claim 2 wherein the blade position in step (b) and (d) is regulated to control amounts of tissue severed during blade movement.

9. The method according to claim 3 wherein the blade position in step (b) and (d) is regulated to control amounts of tissue severed during blade movement.

10. Surgical apparatus for cutting tissue, the apparatus comprising:

a hollow needle having a port therein for enabling tissue entry into a needle lumen through said port;

a cutting blade disposed within said hollow needle for severing tissue enabling the needle lumen through said port;

a driver, connected to said cutting blade, for moving the blade between a first position enabling tissue entry through said port and a second portion closing said port, the tissue entering the needle being severed as the blade moves between the first and second position;

a vacuum source in communication with said needle lumen for causing tissue entry into the needle lumen through said port and for aspirating severed tissue through the lumen; and

a controller, including a valve for controlling vacuum communication between said vacuum source and said needle lumen and connected to said driver, for coordinating vacuum and blade movement so that vacuum is provided to said needle lumen when the blade is in the first position and during severing of tissue by the blade and reducing vacuum to said needle lumen before moving the blade from the second position to the first position.

11. A surgical apparatus having:

a hollow needle having a port therein for enabling tissue entry into a needle lumen through said port;

a cutting blade disposed within said hollow needle for severing tissue entering the needle lumen through said port;

a device, connected to said cutting blade, for moving the blade between a first position enabling tissue entry through said port and a second position closing said port, the tissue entering the needle being severed as the blade moves between the first and second positions; and

a vacuum source in communication with said needle lumen for causing tissue entry into the needle lumen

through said port and for aspiration of severed tissue through the lumen;

the improvement comprising:

a controller, including a valve for controlling vacuum communication between said vacuum source and said needle lumen and connected to said driver, for coordinating vacuum and blade movement so that vacuum is provided to said needle lumen when the blade is in the first position and during severing of tissue by the blade and reducing vacuum to said needle lumen before moving the blade from the second position to the first position.